

## MEMS inclinometer



### Description

**Model 5310 MEMS inclinometer** has MEMS, it supply very excellent resolution and accuracy in real-time.

Model 5310 that was added the amplification circuit to the MEMS sensor can measure dynamically, semi-permanently, and in real-time.

We provide 2 types of MEMS inclinometer as 1axis (0°, and 180°) and 2axis(0~180°, 90~270°)

MEMS inclinometer of our company has much confidence because it adjusts with high precision of angle division device. You can use MEMS inclinometer by establishing the sensor bracket in the zone or building where inclination is expected and then attaching MEMS inclinometer and confirm initial measurement. The difference between initial value and current value is angle variation. You can measure precisely by provided conversion factor.

MEMS inclinometer is designed for waterproof, rustproof and shock absorption by precise process of stainless steel.

### Features

- Stability and confidence with which it can operated in severe environment
- Selection of anticorrosive and rustproof material
- 105m H<sub>2</sub>O waterproof
- Selected materials to minimize thermal zero shift
- Dynamic measurement is possible
- Easy installation by circular level

### Ancillary equipments

- Power supply (±12 VDC)
- Protective cover
- Universal terminal box (model 7012/7024)



[5420M beam sensor]

### Ordering information

- Cable length
- Application of uniaxial and biaxial type
- Limits degree of measured data for structure
- Keeping readout unit
- Application field

### The readout

It is connected to the system such as the voltage readout units, or data logger as it is the electrical sensor that output mV

- ACE-1500 (MEMS readout)
- ACE-900 series (MEMS mini logger)
- ADL-200A (Smart logger)
- AL Module (Smart LoRa system)

### Applications

Dynamic measurement is possible MEMS inclinometer that it suits for study object or spot where needs real time measurement.

- Measurement of inclination followed by the effect of open cut or excavation
- Measurement of inclination of beam and abutment
- Measurement of deformation or inclination of retaining wall
- Measurement of movement or convergent of tunnel
- Measurement of inclination of a vessel

### Specification

Model	5310	5310B
Sensor element	MEMS sensor (Micro electro mechanical system)	
Range	±5° ~ ±10°	
Measure direction	1 axis	2 axis
Rating output	-5~5 VDC	
Accuracy	±0.1% FSR	
Non-linearity	±0.5% FSR	
Input voltage	+12V, -12V	
Operating temperature	-30~80°C	
Waterproof	105m H <sub>2</sub> O	
Materials	Stainless steel, O-ring	
Weight	① Inclinometer 0.3kg/1axis, 0.5kg/2axis ② Mounting bracket 0.2kg	
Signal cable	Ø4.5mm, 0.24mm <sup>2</sup> × 4C shielded PVC sheath cable	
Accessories	① Mounting bracket ② 3/8" Anchor bolt ③ Anchor plate	



[Installation of MEMS inclinometer]